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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,298	01/25/2005	Cornelius Antonius Hezemans	NL 020683	1496

24737 7590 04/19/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
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EXAMINER

NGUYEN, LINH THI

ART UNIT PAPER NUMBER

2627

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/522,298

Applicant(s)

HEZEMANS, CORNELIUS  
ANTONIUS

Examiner

Linh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Actuator Controller on Disc Device.

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### ***Claim Objections***

3. Claim 7 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 7 is directed to a method for initializing radial position of a optical lens wherein claim 1 is directed to, as best understood, a method for detecting deceleration or acceleration of the sledge, or a disk drive apparatus.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 1 is rejected under 35 U.S.C. 101 because the claim is directed to neither a "process" nor a "machine," but rather hold two different statutory classes of invention, the first being an disc drive apparatus and the second being a method for detecting deceleration or acceleration of the sledge. According to the MPEP section 2173.05 (q) stated "a single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C 112, second paragraph. In *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990), a claim directed to an automatic transmission workstand and the method steps of using it was held to be ambiguous and properly rejected under 35 U.S.C. 112, second paragraph. Such claims should also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed neither a "process" nor a "machine," but rather embraces or overlaps two different statutory

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classes of invention set forth in 35 U.S.C 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. *Id.* At 1551.”

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 which claims both an apparatus and the method steps of using the apparatus, therefore, it is indefinite.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being unpatentable by Seiji et al (JP Publication number 2001067680).

In regards to claim 1 Seiji et al discloses a disc drive apparatus of a type comprising: radially displaceable scan means (Fig. 1, actuator), comprising: a sledge (Fig. 1, element 5) radially displaceable with respect to an apparatus frame (Fig. 1); a platform (Fig. 1 element 2; It is inherent that there is plate form to hold up the objective lens.)

radially displaceable with respect to said sledge; a method for detecting a substantial deceleration or acceleration or stop of the sledge when moving radially (Paragraph [0005], lines 1- 2); the method comprising the step of detecting a radial displacement of said platform with respect to said sledge (Paragraph [0035], lines 6-10).

In regards to claim 2, Seiji et al discloses a method according to claim 1, for use in a disc drive apparatus comprising an electromagnetic device in an actuator for displacing said platform with respect to said sledge (Fig. 1, element 2 and 5), the method comprising the step of detecting a back-EMF in said electromagnetic device (Paragraph [0037], line 1).

In regards to claim 3, Seiji et al discloses a method according to claim 1, for use in a disc drive apparatus (Fig. 1) comprising an optical system for scanning a disc (actuator), the optical system defining an optical path (radially) of which at least a part is substantially fixed with respect to the sledge (Paragraph [0033]) and comprising an optical element (objective lens) which is fixed with respect to the platform (Fig. 1, element 2, it is inherent that there is a platform to hold up the lens); the method comprising the step of detecting an optical read signal and deriving therefrom an X-displacement signal (Paragraph [0035], lines 7-10).

In regards to claim 4, Seiji et al discloses a method according to claim 1, wherein it is determined that a substantial deceleration or acceleration or stop of the sledge

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(Paragraph [0035], lines 6-7 and Paragraph [0037], lines 3-6) occurs when a detected radial displacement of said platform with respect to said sledge exceeds a predetermined decision threshold (Paragraph [0034] and Paragraph [0043]; when error is detected due to vibration (swaying the objective lens, which is moved by elements 4 and 5, causes a radial displacement).

In regards to claim 5, Seiji et al discloses a method according to claim 2, wherein an actuator is activated such as to counteract a radial displacement of said platform with respect to said sledge; the method comprising the step of detecting an actuator control signal (Paragraph [0035]).

In regards to claim 6, Seiji et al discloses a method according to claim 5, wherein it is determined that a substantial deceleration or acceleration or stop of the sledge occurs when the detected actuator control signal exceeds a predetermined decision threshold (Paragraph [0037], lines 4-6).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seiji et al in view of Hangai et al (US Patent Number 4977554). For a description of Seiji et al see rejection, supra.

In regards to claim 7, Seiji et al discloses a method for detecting a substantial deceleration or stop of the sledge using a method according to claim 1 (Paragraph [0005], lines 1-2 and Paragraph [0037], lines 4-6)

Seiji et al does not but Hangai et al discloses a method for initializing the radial position of an optical lens in a start-up phase (Column 4, lines 4-8) of a disc drive apparatus (Fig. 2), the method comprising the steps of: exerting a force on said sledge (Column 5 lines 16-17); stopping said force as soon as a substantial radial displacement of said platform with respect to said sledge is detected (Column 5, lines 16-18). At the time of the invention it would have been obvious to person of ordinary skill in the art to modify Seiji et al method of a disc drive actuator to detect the initial radial position of the optical lens as Hangai et al suggested. The motivation for doing so would have been to more accurately detect the position of the slider (Column 1, line 54).

In regards to claim 8, Seiji et al discloses a disc drive apparatus, comprising: radially displaceable scan means (actuator), comprising: a sledge radially displaceable with respect to an apparatus frame (Fig. 1); a platform radially displaceable with respect to said sledge (Fig. 1 element 2 in respect to element 5);

Seiji et al does not but Hangai et al discloses an apparatus further comprising: sledge stop detection means (Fig. 2, elements 29) for detecting that the moving sledge comes



to a standstill (Column 5, lines 10-11); said sledge stop detection means (Fig. 2, element 31) comprising radial displacement detection means for detecting a radial displacement of said platform with respect to said sledge (Column 4, lines 1-8).

In regards to claim 9, rejected for the same reasons as claim 2 above.

In regards to claim 10, rejected for the same reasons as claim 3 above.

In regards to claim 11, rejected for the same reasons as claim 4 above.

In regards to claim 12, rejected for the same reasons as claim 5 above.

In regards to claim 13, rejected for the same reasons as claim 6 above.

In regards to claim 14, Seiji et al discloses an apparatus, further comprising: a controllable sledge actuator for moving the sledge radially with respect to said apparatus frame (Fig. 1 element 26); a control unit for controlling said sledge actuator (Fig. 1 element 25).

Seiji et al does not but Hangai et al discloses an apparatus comprising control unit being responsive to said radial displacement detection means (Fig. 2, element 29) to switch off said sledge actuator (Column 4, lines 31-33) when said radial displacement detection means indicate that said moving sledge has come to a standstill (Column 4, lines 1-8 and Column 5, lines 10-20).

In regards to claim 15, Seiji does not but Hangai et al discloses an apparatus, wherein a displacement range (Fig. 1 range from 34a-34b) of said sledge with respect to said apparatus frame is restricted by at least one end stop (Column 5, lines 1-3);

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wherein said control unit is designed, in an initializing phase, to energize said sledge actuator such as to move said sledge towards said end stop (Column 5, lines 10-19); and wherein said control unit switches off said actuator as soon as said sledge has reached said end stop (Column 4, lines 58-67). At the time of the invention it would have been obvious to person of ordinary skill in the art to modify Seiji et al disc driver apparatus to have stop detection means as suggested by Hangai et al. The motivation for doing so would have been to create a perfect stop without causing a loud contact (Column 5, line 5)

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh T. Nguyen whose telephone number is 571-272-5513. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A. Wellington can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN  
April 7, 2006

  
ANDREA WELLINGTON  
SUPERVISORY PATENT EXAMINER